

Latest News Technology and Digital Trends

The world is undergoing a rapid transformation, driven by cutting-edge technologies such as Artificial Intelligence (AI), Post-Quantum Cryptography (PQC), Blockchain Technology, Rust, and Python.

These technologies are having a profound impact on the way we operate and deliver services to our customers. They are also changing the way we work and interact with each other.

You can find below a selection of articles that I have written over the years on these topics.

Our Stories

Banner for the Apple MM1

Advancing AI with Multimodal LLMs Insights from MM1

Explore Apple's MM1 paper on Multimodal Large Language Models (MLLMs). Learn about their architecture, pre-training strategies, and AI potentials.

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Banner for Real-time automatic speech recognition (ASR)

Accelerating Real-Time Speech Recognition on macOS with OpenAI Whisper

Explore how OpenAI Whisper and Metal Performance Shaders are transforming real-time speech recognition on macOS, offering unparalleled speed and accuracy.

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Banner for RustLogs (RLG)

Unleashing the Power of Logging in Rust with RustLogs (RLG)

Discover RustLogs (RLG), the flexible logging library for Rust with structured l

og formats, asynchronous logging, and extensive customisation options.

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Image of Colourful, abstract digital art of a cat

Le Chat by Mistral AIA New Era in Conversational AI

Meet Mistral AI's new multilingual Assistant. An advanced AI that can understand and respond in multiple languages, all in one conversation and in real-time.

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Futuristic blue spaceship with neon lights

Google Gemma AI Transforming Open-Source AI Development

Explore Google's Gemma AI Model An open-source project offering ethical AI solutions for both personal and enterprise use.

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Abstract visualisation of AI networks, representing Gemini 1.5's capabilities

Unlocking Gemini 1.5 Google's AI Revolution Explained

Explore Gemini 1.5, Google's AI breakthrough, enhancing efficiency, quality, and context understanding in the AI landscape.

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A person sitting on black bench reading newspaper

EU's AI Act Pioneering Ethical AI Regulation Worldwide

by Sebastien Rousseau (13 Feb 2024)

Delve into the EU's Artificial Intelligence Act, a revolutionary framework setti

ng global standards for ethical AI development and usage.

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A white, spherical modern device

Àkàndé Voice Assistant, A Personal and Executive Assistance

by Sebastien Rousseau (12 Feb 2024)

Discover how Àkàndé leverages OpenAI GPT's natural language understanding, PDF summaries, and efficient caching to redefine personal and executive assistance.

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A robotic woman with butterflies and flowers

Revolutionising AdvertisingHow AI Shapes the Future

by Sebastien Rousseau (08 Feb 2024)

Explore how AI transforms advertising with insights on Amazon's Rufus and Meta's latest developments. Discover the impact on consumer engagement.

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A minimalist, modern corporate office

AI-Powered Speech Analysis, Translation, & Insight Tool

by Sebastien Rousseau (29 Jan 2024)

Explore how Audio Analyser, transforms speech-to-text conversion, text analysis, and translations for actionable insights.

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AI Prompt Engineering 2024Insights & Advanced Techniques

Man analysing data on screens

by Sebastien Rousseau (23 Jan 2024)

Explore the 2024 advancements in AI Prompt Engineering, uncovering innovative trends and techniques revolutionising tech and finance sectors.

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Alien StudioMy Tech-to Art Journey in Photography

A Sunset's muse, a serene glance; beauty in stillness

by Sebastien Rousseau (15 Jan 2024)

Join me on my personal journey from Rust, AI, and Quantum Computing to redefining art and photography through Alien Studio.

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Qiskit & Quantum Fourier Transform for Credit Ratio Analysis

A Quantum Computer Room

by Sebastien Rousseau (08 Jan 2024)

Explore how IBM Qiskit and Quantum Fourier Transform revolutionise credit ratio analysis in finance, offering unprecedented accuracy and speed.

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AI Trends 2024Insights and Predictions for the Future

A Drone View of London

by Sebastien Rousseau (01 Jan 2024)

Explore the transformative AI trends of 2024, from generative AI to AI in retail , and how they'll shape our future.

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Revolutionising Finance with AI-Enhanced Quantum Algorithms

A Circuit Board Cityscape

by Sebastien Rousseau (25 Dec 2023)

Explore the transformative role of AI in quantum algorithms for finance, with a focus on their mathematical intricacies and banking applications.

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State of AI and Quantum Computing in BankingA 2023 Review

A Circuit Board with an AI GPU

by Sebastien Rousseau (18 Dec 2023)

Exploring 2023's Technological LandscapeAI & Quantum Computing Revolutionising Banking, Rising Open-Source Models, and Evolving Regulations & Governance.

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Quantum Key Distribution Revolutionising Security in Banking

An HSBC Headquarter in London Canary Wharf Docks

by Sebastien Rousseau (11 Dec 2023)

As quantum computers pose a threat to traditional encryption methods, Quantum Key Distribution (QKD) emerges as a game-changer, offering unparalleled security.

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Efficient Date and Time Management with DateTime (DTT)

A DTT Logo

by Sebastien Rousseau (04 Dec 2023)

DateTime (DTT) is a comprehensive Rust library for parsing, validating, manipulating, and formatting dates and times. It offers a high level of precision and a wide range of functionalities.

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KyberLibA Rust-Powered Shield Against Quantum Threats

A KyberLib Logo

by Sebastien Rousseau (28 Nov 2023)

A Robust and Quantum-Safe Cryptography Implementation of the CRYSTALS-Kyber Algorithm, to Protect Your Data from Quantum Threats and Cryptanalytic Attacks.

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CRYSTALS-KyberThe Safeguarding Algorithm in a Quantum Age

A complex quantum computer architecture

by Sebastien Rousseau (19 Nov 2023)

Discover how CRYSTALS-Kyber, a quantum-resistant cryptography algorithm, is revolutionising the world of cryptography and preparing us for the quantum era.

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Exploring Generative AISHaping the Future of Technology

Holographic cubes at a concert.

by Sebastien Rousseau (12 Nov 2023)

Embark on a Journey to Explore Generative AIInvestigating Its Impact, Ethical Implications, and Future Synergies.

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Mathematical and Cryptographic Constants for Rust Security

A Mathematical and Cryptographic Constants

by Sebastien Rousseau (05 Nov 2023)

Safeguard code integrity with meticulously vetted mathematical and cryptographic constants, bolstering memory and concurrency safety for enhanced code security.

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Streamlining Rust Library Development with Code Generation

A White Building

by Sebastien Rousseau (26 Oct 2023)

Boost Rust library development with LibMakeA code generator tool that enforces best practices and generates initial code, saving developers time and effort.

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Protecting Data in the Quantum AgeThe Hash Library (HSH)

A creative illustration on Quantum computing theme

by Sebastien Rousseau (16 Oct 2023)

The Hash Library (HSH) is a quantum-resistant cryptographic hash library that offers a lightweight, efficient, and easy-to-use solution for keeping your data secure.

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Shokunin, the fastest Rust-based Static Site Generator (SSG)

A Turned off laptop computer on top of a white table

by Sebastien Rousseau (9 Oct 2023)

Empowering you to create high-impact static websites with infinite possibilities
, limitless scalability, and a truly unique web presence that you control.

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Automating ISO 20022 Payment Files Creation with Pain001

A very tall building that has a lot of holes in it

by Sebastien Rousseau (29 Sep 2023)

Streamlining the creation and compliance of ISO20022 Payment Messages for cross-
border payments and reporting.

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The making of the Express Transaction Credits Platform

Man typing on a laptop keyboard

by Sebastien Rousseau (15 Feb 2018)

Developing a comprehensive framework for the next generation of Ethereum Request
for Comment compliant tokens using the ERC-223 standard.

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Unveiling a new Cryptocurrency and Faster Payment Solution

Canary Wharf clocks

by Sebastien Rousseau (04 Feb 2018)

A significant chapter in the ongoing evolution of the global financial landscape
, shaped by technological innovation, geopolitical shifts, sustainable finance a

nd the future of money.

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ERC-20The Ethereum Token Interface That Changed the World

Computer screen with trades

by Sebastien Rousseau (24 Jan 2018)

Ethereum Token InterfaceUnderstanding ERC-20, which allows for the implementation of a standard API for tokens within smart contracts.

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Understanding the Technology behind Blockchain

Computer and Mobile screens with trades

by Sebastien Rousseau (09 Jan 2018)

Building a Cryptocurrency on the Ethereum BlockchainA Comprehensive Guide to Blockchain Development, Tokenization and Cryptocurrency Implementation.

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Blockchain explained, the technology that matters the most

Horizontal view of a tall building

by Sebastien Rousseau (02 Jan 2018)

A story of the extraordinary journey of securing digital transactions through Private-key Cryptography and Peer-to-peer (P2P) networks.

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BitcoinA Year In Review of the First Cryptocurrency

Physical Bitcoins

by Sebastien Rousseau (01 Jan 2018)

BitcoinA Peer-to-Peer Electronic Cash System (P2P ECS) that has the potential to revolutionise the way people transact online.

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